Helena to Great Falls Bicycle/Pedestrian Path Feasibility Study

Workshop

July 9, 2008

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Workshop Goals and Format

- Participatory process to gather all comments
- Open-house followed by a presentation
- Interactive stations/posters set up around the room
- Other housekeeping issues

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Outline

- **Background**
  -Legislative directive
  -Definitions
  -Data
- **Corridor identification**
  -Route selection
  -Termini
- **Route segmentation**
  -Separated path
  -Shoulder widening
  -Chokepoints
- **Implementation Strategies**
  -Independent utility
    - Scenarios
    - Definitions
    - Estimated Cost Ranges
  -Other

Background

- Study requested by Senate Highways and Transportation Committee
- MDT Director committed Department resources to undertake this study and:
  - -Create a Technical Advisory Group (TAG)
  - -Conduct public involvement
  - -Prepare a final report

Study Goals

- Study the feasibility of a bicycle and pedestrian path between Helena and Great Falls within public road right-of-ways.
- Promote tourism, recreation, and public safety.

Study Timeline

Helena to Great Falls Bicycle/Pedestrian Path Feasibility Study Timeline

Task	Month																											
		Dec/Jan				Feb				Mar				Apr				May				June				July				Aug			
	Week	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1. Physical Conditions																																	
2. Operational Conditions																																	
3. Public Lands																																	
4. Develop Proposed Pathway Configuration Parameters																																	
5. Technical Advisory Group Scoping Meeting																																	
6. Safety Conditions																																	
7. Bicycle and Pedestrian Facilities																																	
8. Utilities Research																																	
9. Environmental Scan																																	
10. Establish Screening Criteria																																	
11. Identify Feasible Routes																																	
12. Technical Advisory Group and Agency Input																																	
13. Public Scoping Meeting																																	
14. Develop Preliminary Draft Study Report																																	
15. Obtain Public Input																																	
16. Develop Final Report																																	
17. Study Completion																																	

Funding

- This is a feasibility study only

  No funding sources have been identified

Key Definitions

- **Bicycle path or shared use path**: A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. This is a bi-directional path on one side of a road.*
- **Bicycle lane**: A portion of roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.*
- **Shared roadway**: A roadway which is open to both bicycle and motor vehicle travel. This may be an existing roadway, street with wide curb lanes, or road with paved shoulders.*
- **Viability**: A rough gauge of constructability based on right-of-way, topography, and physical obstructions.
- **Independent utility**: A segment of the corridor where a separated path (or widened shoulders) can be developed as a stand-alone amenity with areas that allow for vehicle parking.

* Source: American Association of State Highway and Transportation Officials (AASHTO)

Data

- Spatial data
  - -Roadway
  - -Bridge
  - -Other spatial layers
- Environmental information
- Utility information
- Right-of-way (from construction plans)
- Hydrology
- Fish, Wildlife, and Parks fishing access sites & toilet facilities
- Aerial imagery
- Windshield surveys conducted to identify topographic constraints*

*Note: Not an engineering survey

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    - Estimated Cost Ranges
  - -Other

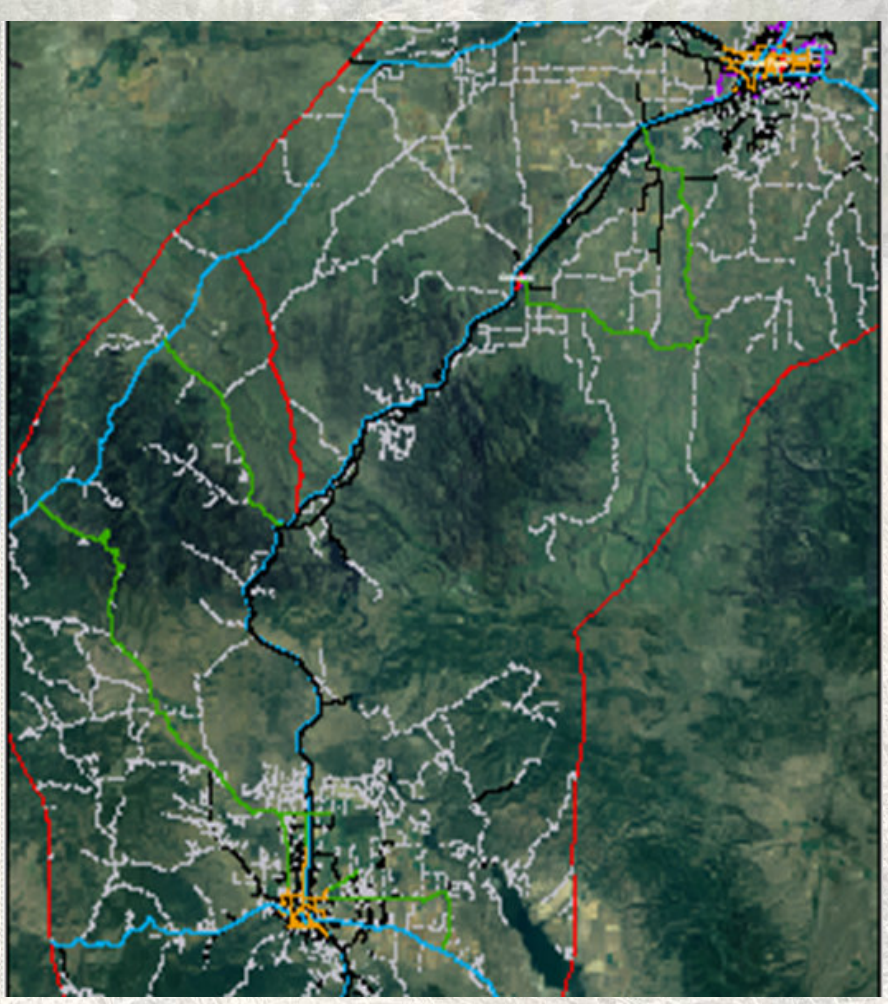
Corridor/Route Selection Criteria

Termini:	Gore Hill and Lincoln Road
Boundary:	20 miles on either side of I-15
Route:	Public paved route
Right-of-way:	Public ROW along state and county roads
Safety:	Minimize crossovers

All Study Area Roads

1st Iteration

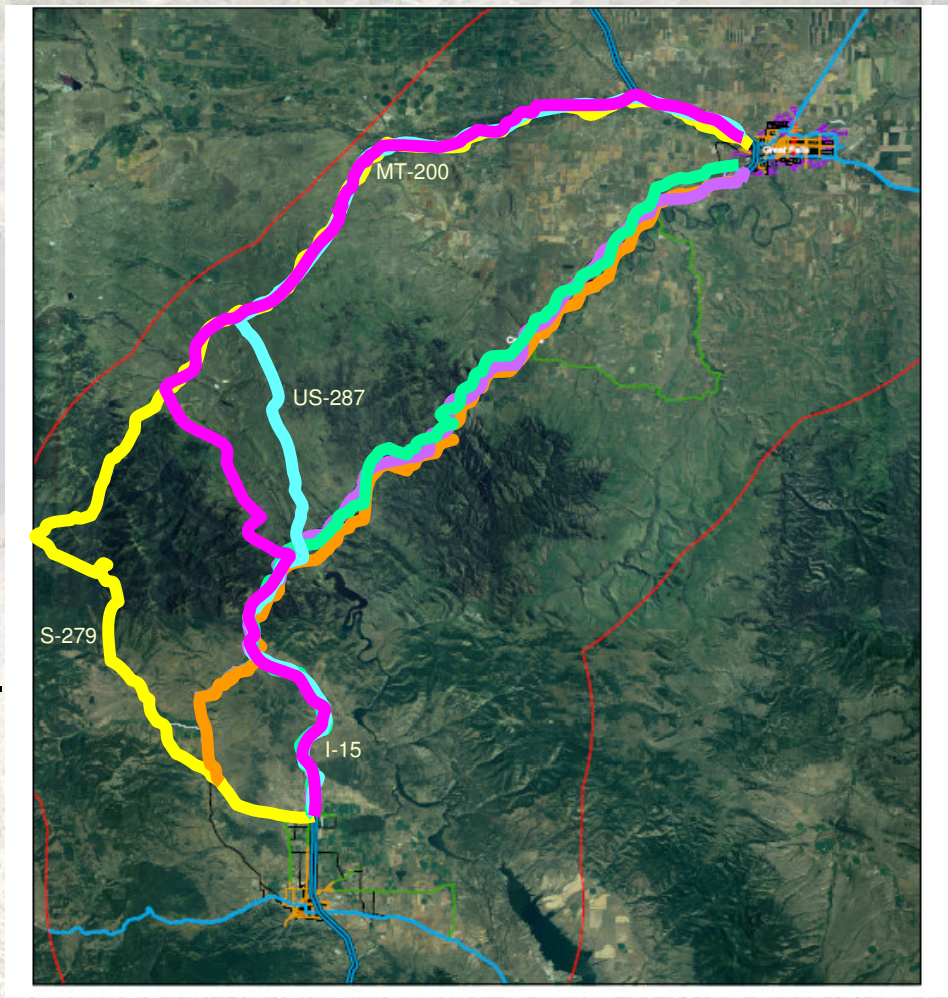
- All roads open to public travel within a 40 mile study boundary.



Major Corridors

2nd Iteration

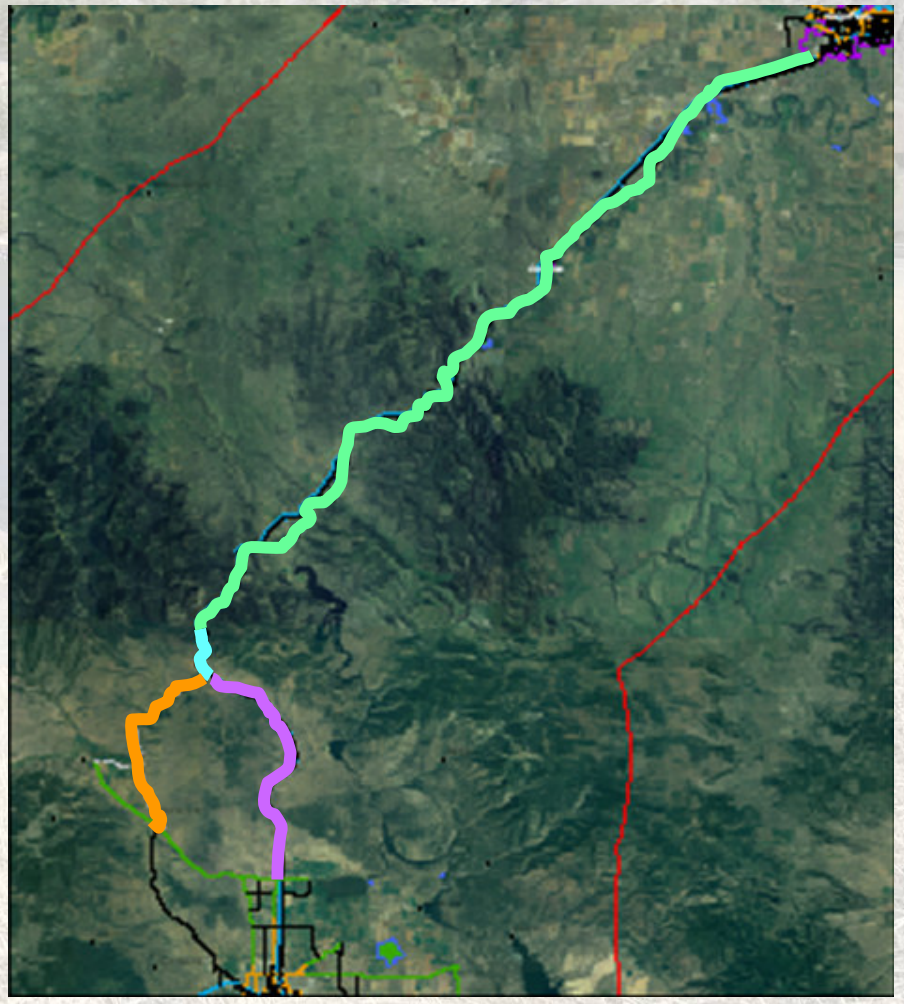
- Lincoln Road (S-279) / MT-200
- I-15 / Rec Rd / S-434 / MT-200
- I-15 / US-287 / MT-200
- I-15
- I-15 / Recreation Road
- Chevallier Drive / Recreation Rd.



Identified Routes

3rd Iteration

- Recreation Road
- I-15 (three miles between exits 216 and 219)-this segment is a chokepoint that has safety implications and is included in this study only to preserve corridor continuity
- Chevallier Drive from Lincoln Rd. to Sieben (gravel road, low AADT of 40)
- Note: For purposes of this study, I-15 from Lincoln Road to Sieben is not being considered due to high AADT and high speeds



Recreation Road

- 63.6 mile route along the Little Prickly Pear Creek and Missouri River between Spring Creek Interchange (exit 219) and Gore Hill in Great Falls
- The entire route is paved and existing shoulders are generally under 1 foot the entire length
- Right-of-way (generally 30-60 feet each direction from centerline) varies along the route and owned by State and Cascade County
- Rural speeds from 55-70 mph and annual average daily traffic is 320-750

Recreation Road

I-15 (3 miles: exit 216 - exit 219)

Example of Chokepoint **Not feasible due to safety**

- 3 mile route connecting exit 216 (Sieben and Chevallier Drive) to exit 219 (Recreation Road)
- Paved route with an 8-10 foot shoulder except for a 526 foot bridge segment chokepoint with a 2 foot wide shoulder
- Right-of-way is state owned
- Annual average daily traffic is 4190

Chevallier Drive

- 12.9 mile route along Little Prickly Pear Creek connecting I-15 with Secondary 279 (Lincoln Rd)
- The first 2 miles on north end by Sieben Interchange are paved. The remaining 10.9 miles are gravel
- Right-of-way (generally 20-25 feet each direction from centerline) is owned by Lewis and Clark County
- Annual average daily traffic is 40

I-15 (Lincoln Road Int. to Sieben Int.)

Not feasible due to safety

- 16 mile route connecting Lincoln Road to the Sieben Interchange exit 216 (Chevallier Road)
- Paved route with an 8-10 foot shoulder the entire length
- Right-of-way is state owned
- Not currently feasible due to clear zone constraints
- Note: This option could be feasible if private property right-of-way could be donated

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  - -Other

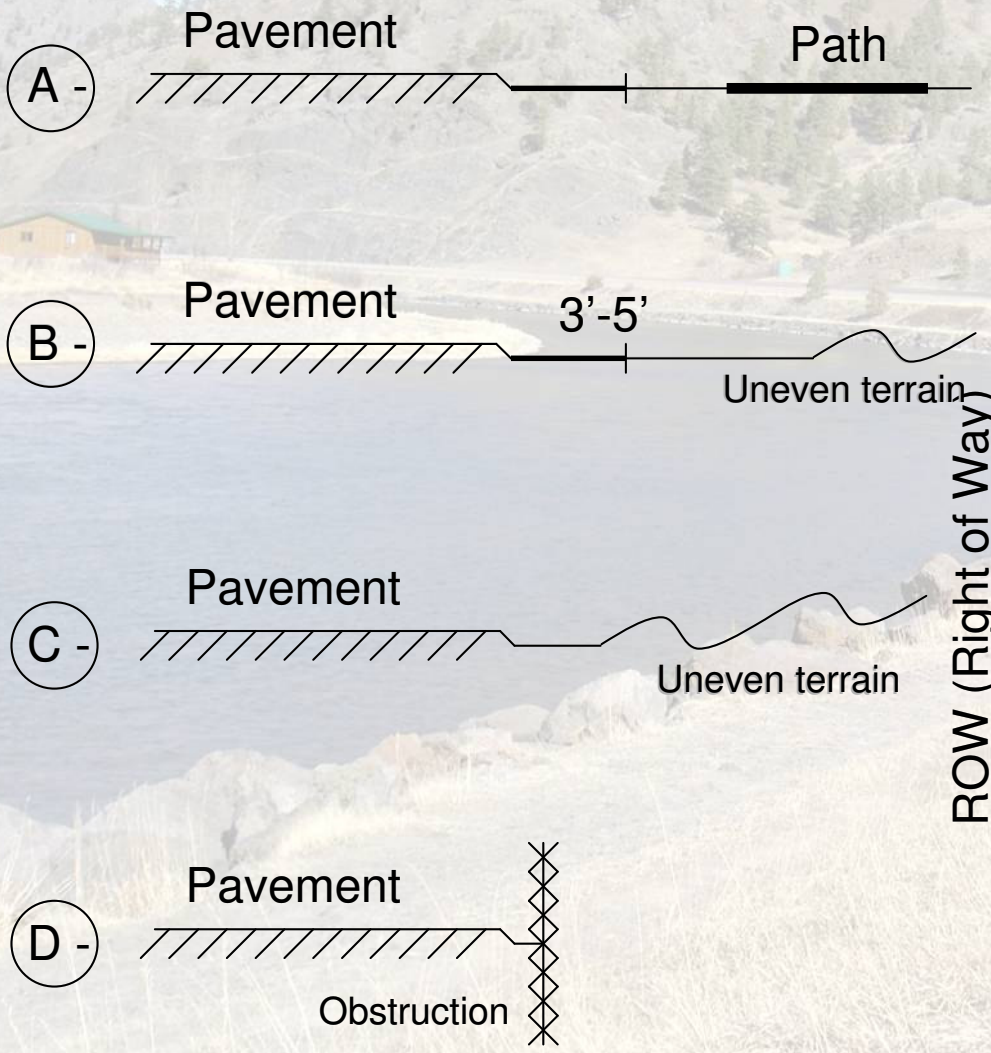
Route Segmentation

- Segment: A continuous section of road with similar properties (i.e. shoulder widths, right-of-way, topography).

- Segment Types:
  - -Separated path (A)
  - -Widened shoulders (both directions) (B)
  - -Less viable separated path (C1)
  - -Less viable widened shoulders (C2)
  - -Chokepoints: bridges, cliffs, guardrails (D)

Note: Smoothing has been used to determine segment lengths

Segment Types



- ROW exists
- **Terrain level beyond pavement**
- **Path viable***

- ROW exists
- **Terrain level 3 feet beyond pavement**
- **Terrain contoured >3 feet**
- **Path less viable***
- **Shoulder viable***

- ROW exists
- **Terrain contoured beyond pavement**
- **Path less viable***
- **Shoulder less viable***

- ROW exists
- **Terrain obstructed beyond pavement**
- **Path not viable***
- **Shoulder not viable***

*Viable: A rough gauge of path or shoulder constructability based on right-of-way, topography, and physical obstructions.

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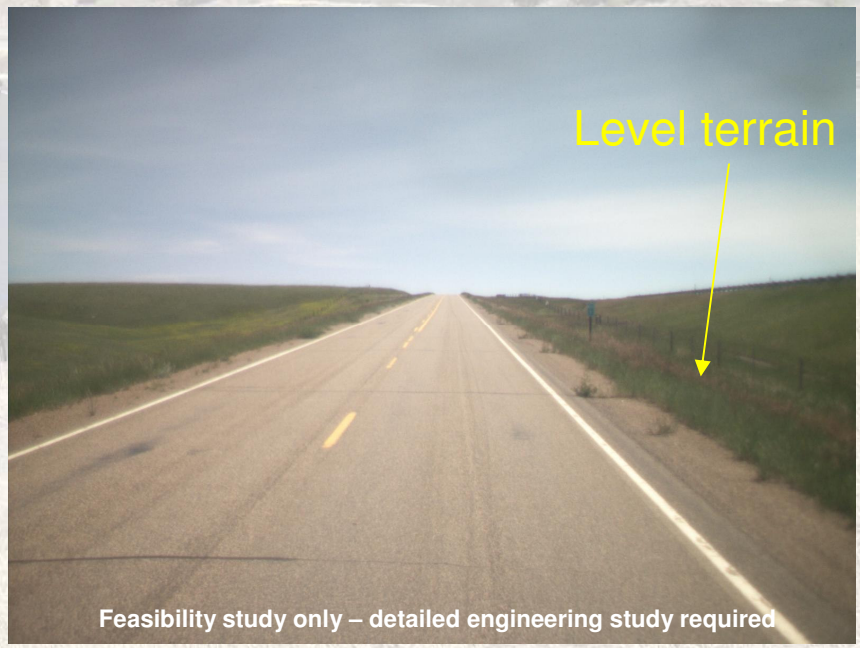
Route Segmentation Type

A - Separated Path

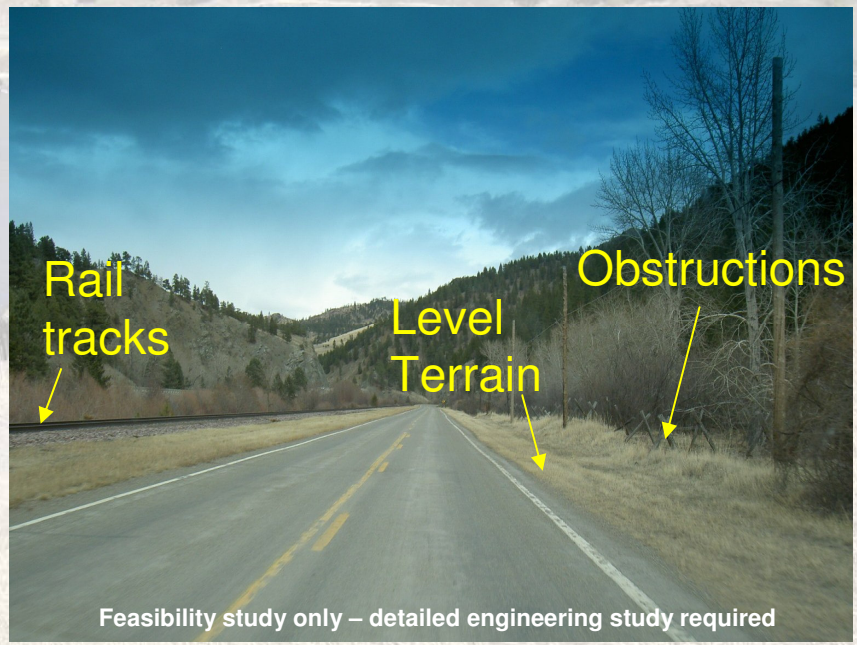
- Segments of road where a physically separated path can potentially be added without a lot of grading, earthwork, or engineering. Right-of-way exists to allow additional paving
- Path width (two-way): 8-10 feet
- Separation width: 4-5 feet



Route Segmentation Type

B - Widened Shoulders (both directions)

- Segments of road where extra paved shoulder width can potentially be added on both sides without roadbed or shoulder modifications. Right-of-way exists to allow additional paving.



Route Segmentation Type

C1 - Less Viable Separated Path

- Areas where the right-of-way exists and no chokepoints are present but construction requires grading, earthwork, or engineering solutions to allow a separated path.

Route Segmentation Type

C2 - Less Viable Widened Shoulders

- Areas where shoulder and roadbed modifications are necessary to allow a paved shoulder on each side. Enough right-of-way exists to accommodate increased shoulder widths.

Feasibility study only – detailed engineering study required

Route Segmentation Type

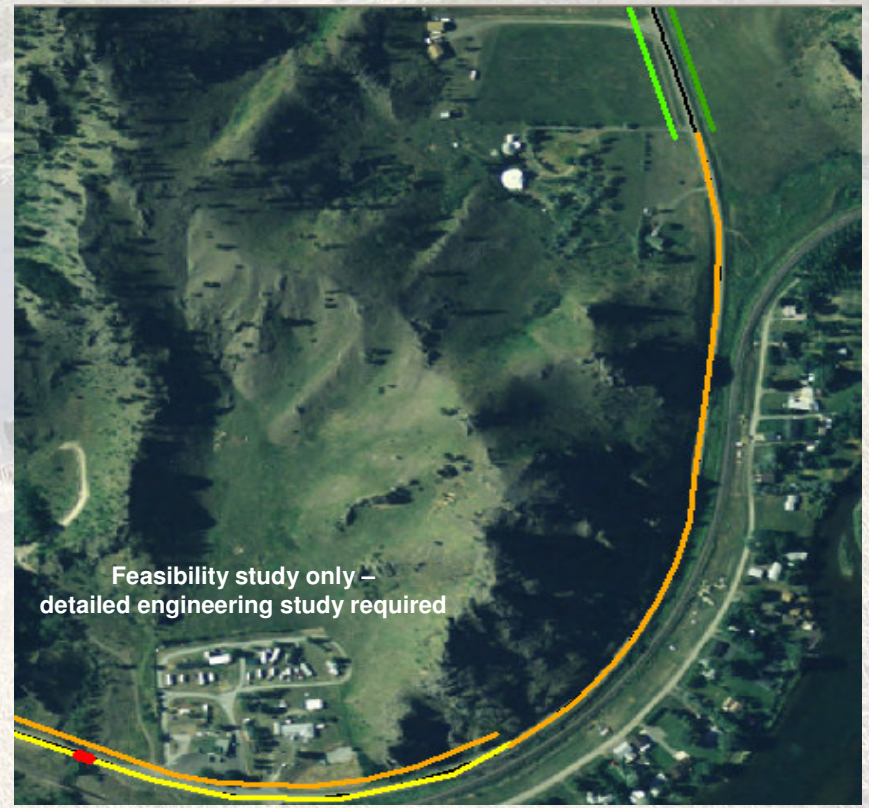
D - Chokepoints: Bridges, Cliffs, Guardrails

Areas where physical barriers prevent at least three feet of paved shoulder on both sides or any addition of shoulder width or a separated path. Sufficient right-of-way may or may not exist.

Route Segmentation Type

Recreation Road

- Separated path
- Less Viable separated path
- Widened shoulders
- Less Viable widened shoulders
- Chokepoint



NOTE: Entire route shown on posters

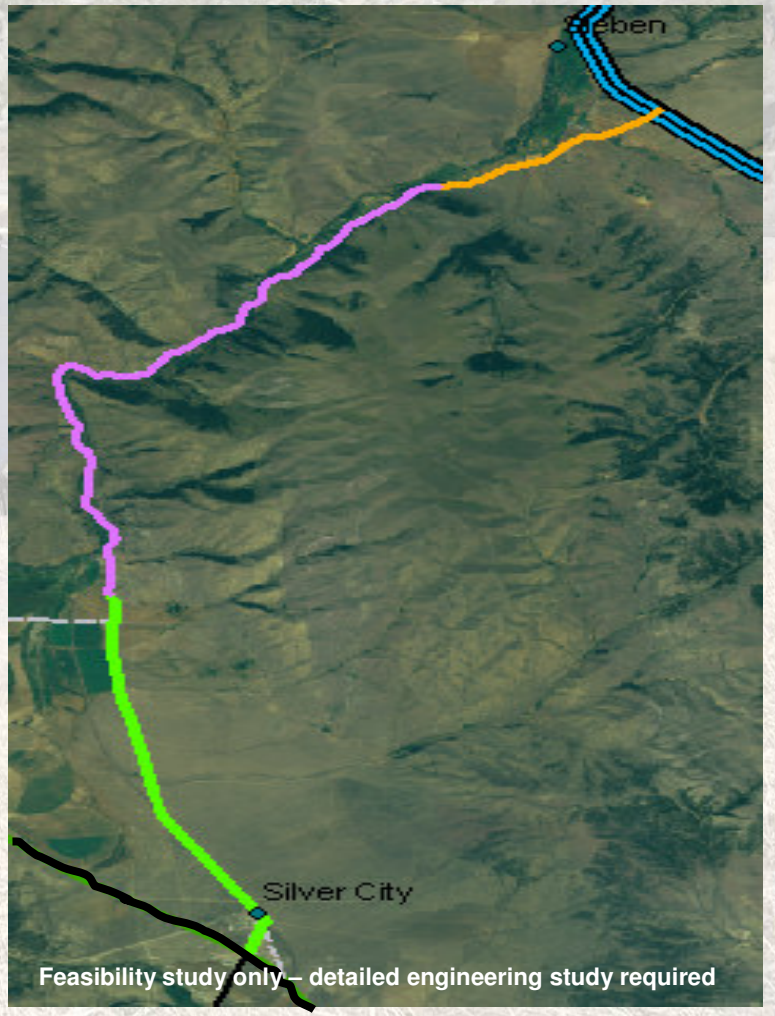
Route Segmentation Type

Chevallier Drive

Separated Path

Less viable widened shoulders

Not viable for either path or shoulders



Segment & Path Continuity

- **A separated path the entire length is not possible due to chokepoints***
- Continuity can be maintained with a mix of segment types (separated paths and widened shoulders) but will require multiple roadway crossings

* The analysis did not include the cost or viability of removing chokepoints

Recreation Road Safety Issues

Number of Roadway Crossings & Segment Lengths

All Possible Separated paths
53 Segments
52 Roadway crossings
35.6 miles - separated
27 miles - 3 feet

Separated paths > 0.5 mile
35 Segments
34 Roadway crossings
33.5 miles - separated
29.1 miles - 3 feet

Separated paths > 1 mile
12 Segments
11 Roadway crossings
26.5 miles - separated
36.1 miles - 3 feet

Widened shoulders entire length
1 Segment
0 Roadway crossings
62.6 miles - 3 feet

Not possible due to chokepoints

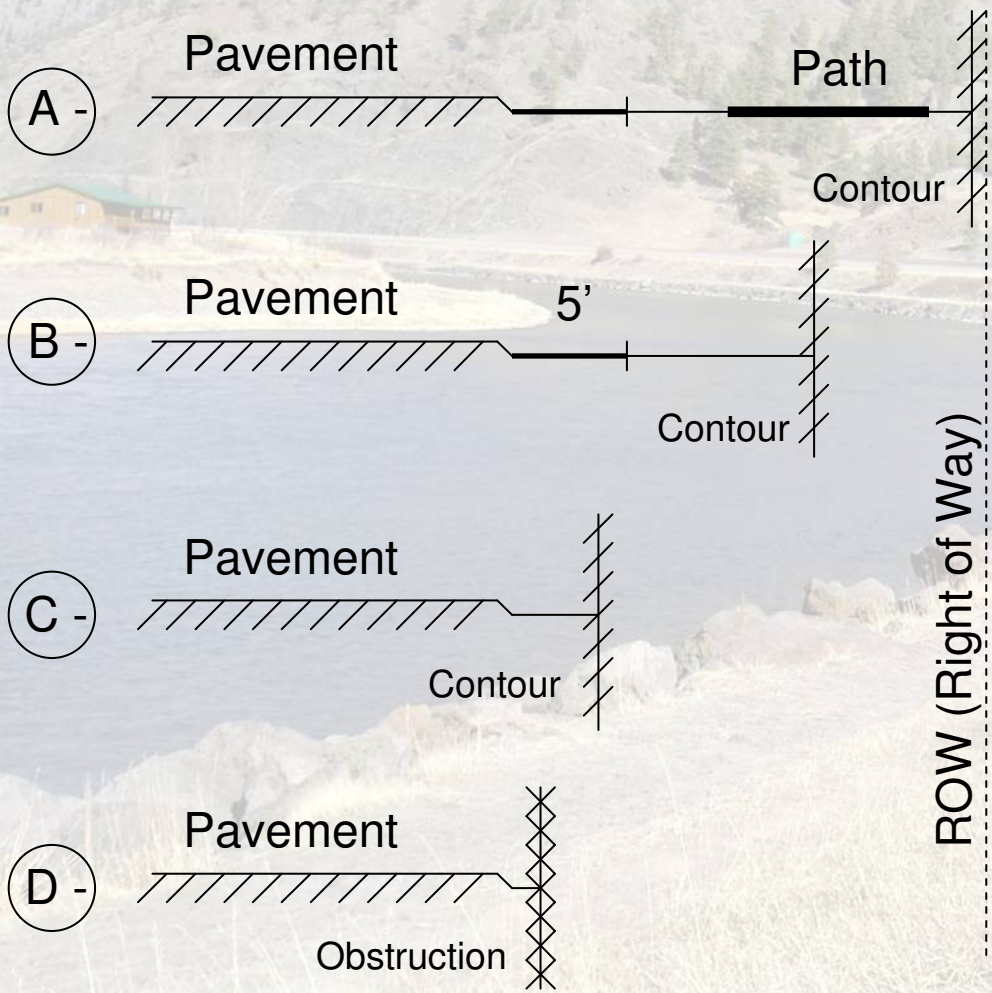
Additional Conflict Points

Chokepoints
(cliff, wetland, guardrail, bridge)

22 locations
2.8 miles

Chokepoint Locations

Estimated Cost Ranges



8 foot path: $150,000/mile +
10 foot path: $170,000/mile +

Two 5 foot shoulders: $200,000/mile +

10 foot path: $200,000/mile ++

$$$ = very expensive & probable environmental issues

Note: All estimated costs are in today’s dollars

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  -Independent utility
    - Scenarios
    - Definitions
    - Estimated Cost Ranges
  -Others? (from public)

Independent Utility

- **Independent utility**: A segment of the corridor where a separated path (or widened shoulders) can be developed as a stand-alone amenity with areas that allow for vehicle parking.

- This strategy supports:
  - a phased implementation of path segments within the corridor by "picking low-hanging fruit first"
  - a recreational travel focus

Segment Criteria & Identification

Criteria

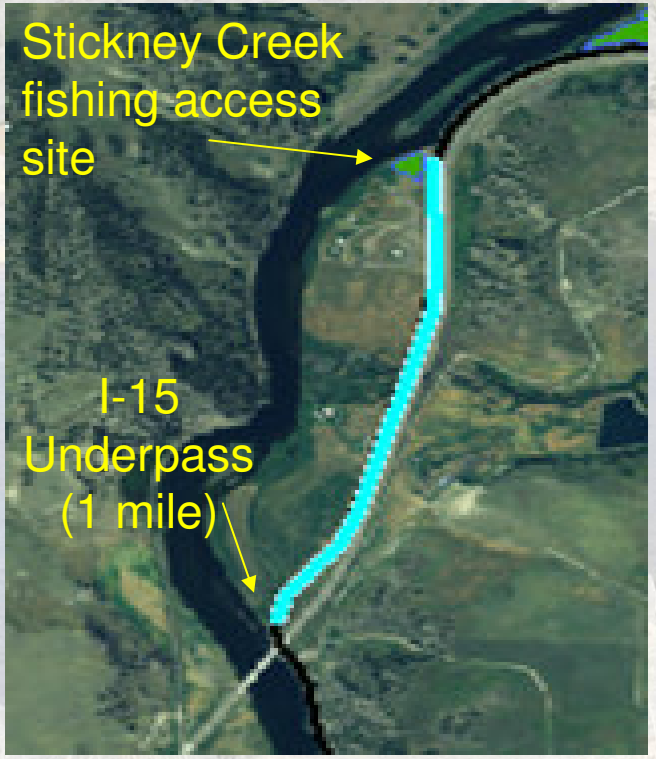
- Segments have vehicle parking areas on either end
- Segment lengths are greater than 1 mile

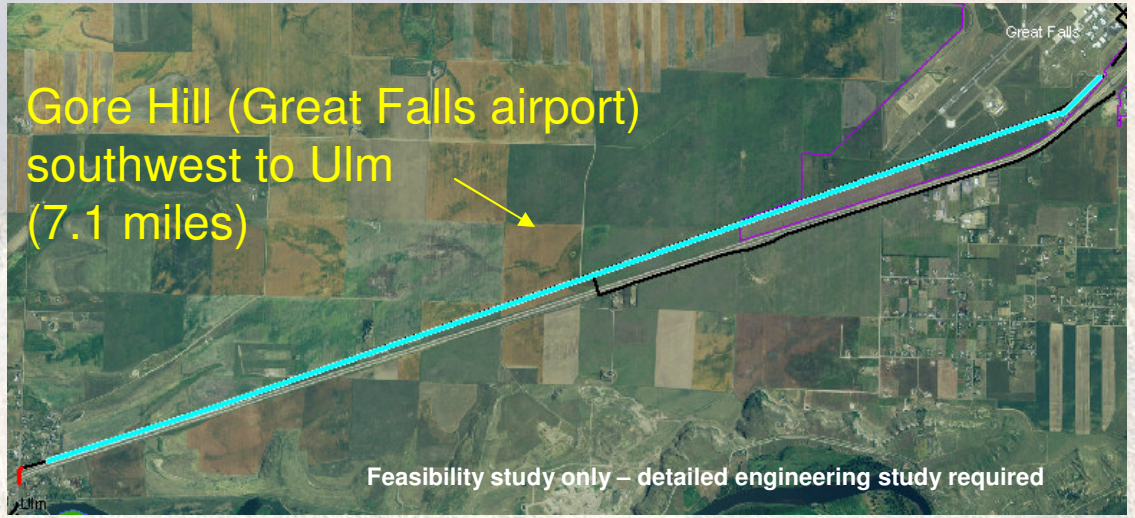
The process of identifying independent utility segments uses two segment types A and B (previously identified) against independent utility criteria

Scenario A1 - Path

Staging/parking areas exist

A1 Path Locations

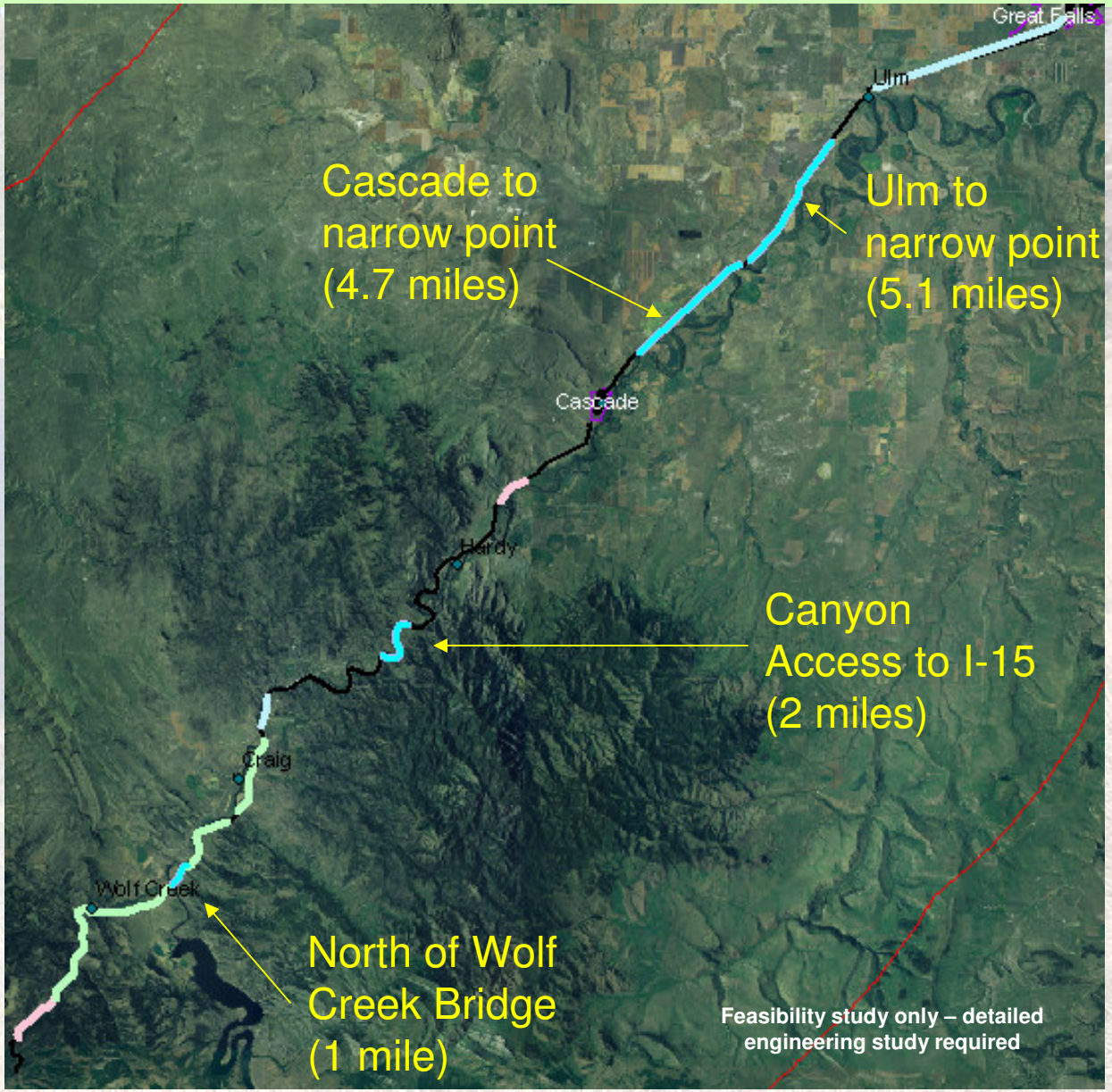




Scenario A2 – Path

Staging/parking area needed

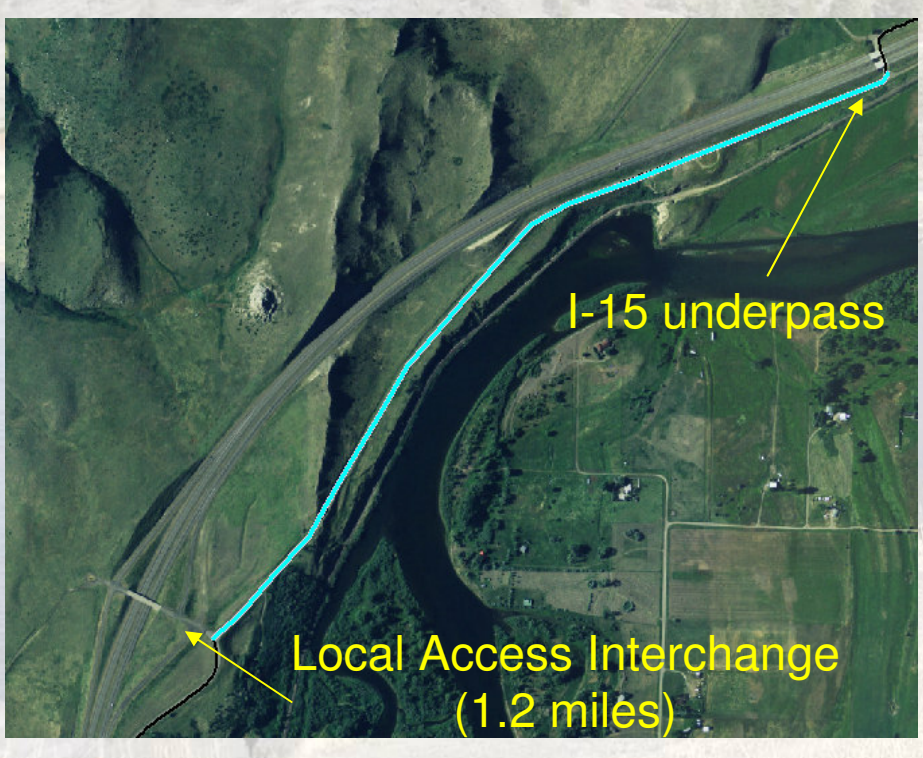
A2 Path Locations

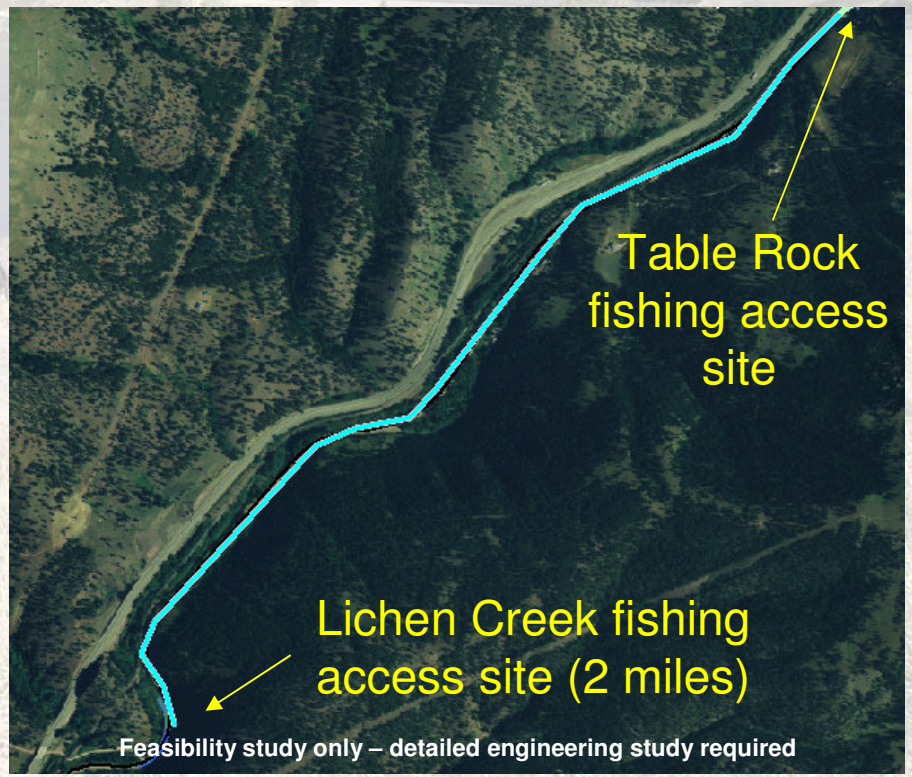


Scenario B1 - Shoulders

Staging/parking areas exist

B1 Shoulder Locations

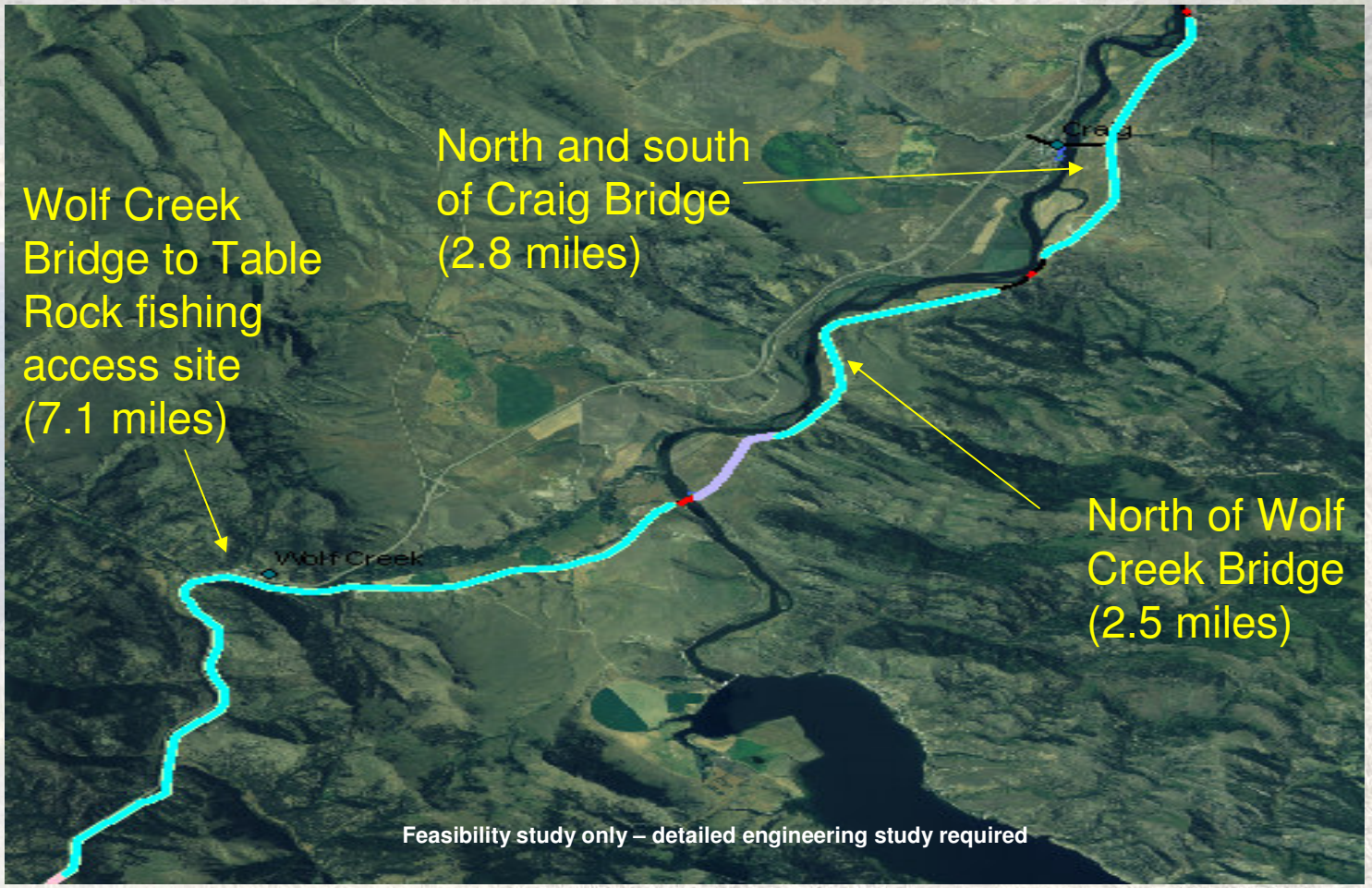




Scenario B2 - Shoulders

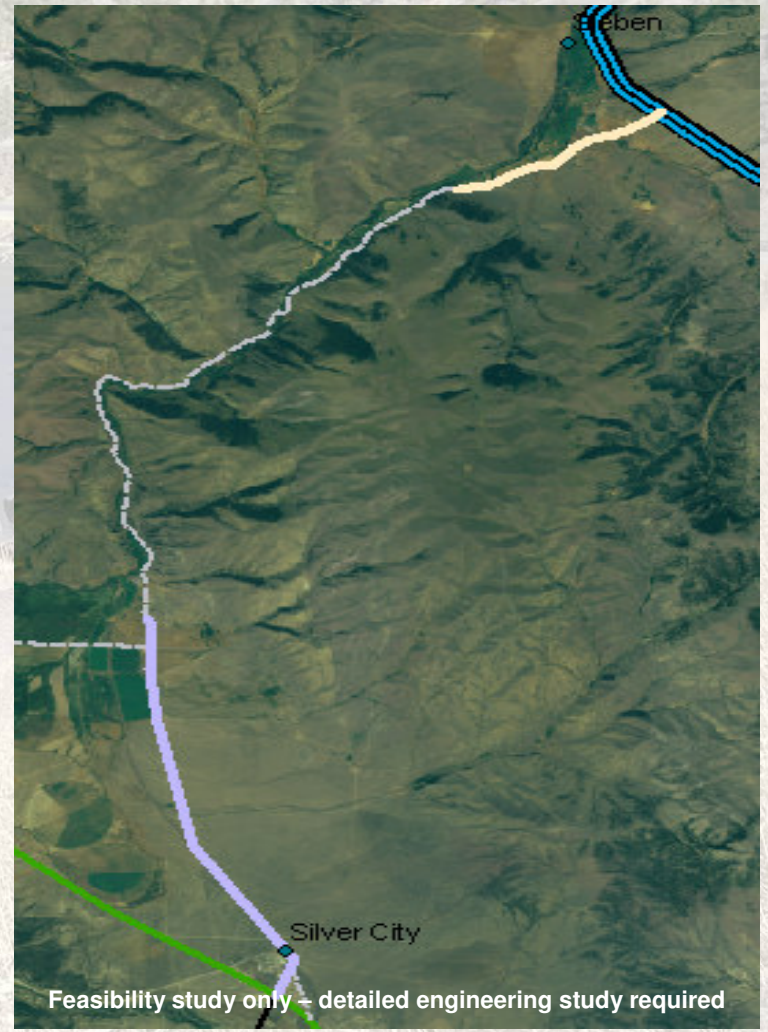
Staging/parking area needed.
(Segment may contain short & narrow bridges)

B2 Shoulder Locations



Scenarios & Locations for Chevallier Dr.

- <u>Potential separated path:</u>
  southern 4.4 miles (scenario A2)



Next Steps

Incorporate Public Comments

Prepare Draft Report

Make Draft Report Available

Incorporate Additional Comments

Finalize and Publish Report

Questions & Comments

?

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